Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/off-kg of copper or copper alloy tumbled or burnished	
	English units—pounds per 1,000,000 off-pounds of copper or copper alloy tumbled or burnished	
Chromium	0.215	0.087
Copper	0.746	0.355
Lead	0.058	0.052
Nickel	0.320	0.215
Zinc	0.594	0.244
TTO	0.198	0.198
Oil and grease [1]	5.830	5.830

[1] For alternate monitoring.

(p) Subpart A—Surface Coating PSNS.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/off-kg of copper or copper alloy surface coated	
	English units—pounds per 1,000,000 off-pounds of copper or copper alloy surface coated	
Chromium	0.274	0.111
Copper	0.951	0.453
Lead	0.074	0.066
Nickel	0.408	0.274
Zinc	0.757	0.312
TTO	0.252	0.252
Oil and grease [1]	7.430	7.430

[1] For alternate monitoring.

(q) Subpart A—Miscellaneous Waste Streams PSNS.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/off-kg of copper or copper alloy formed	
	English units—pounds per 1,000,000 off-pounds of copper or copper alloy formed	
Chromium	0.008	0.003
Copper	0.027	0.013
Lead	0.0021	0.0019
Nickel	0.011	0.008
Zinc	0.022	0.009
TTO	0.007	0.007
Oil and grease [1]	0.218	0.218

[1] For alternate monitoring.

[48 FR 36957, Aug. 15, 1983; 48 FR 50719, Nov. 3, 1983]

§ 468.16 Effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollution control technology (BCT). [Reserved]

Subpart B—Beryllium Copper Forming Subcategory

§ 468.20 Applicability; description of the beryllium copper forming subcategory.

This subpart applies to discharges of pollutants to waters of the United States, and introduction of pollutants into publicly owned treatment works from the forming of beryllium copper alloys.

[51 FR 7571, Mar. 5, 1986]

PART 469—ELECTRICAL AND ELECTRONIC COMPONENTS POINT SOURCE CATEGORY

Subpart A—Semiconductor Subcategory

Sec.

Subpart B—Electronic Crystals Subcategory

Subpart C—Cathode Ray Tube Subcategory

Subpart D—Luminescent Materials Subcategory

AUTHORITY: Secs. 301, 304, 306, 307, 308, and 501 of the Clean Water Act (the Federal Water Pollution Control Act Amendments of 1972, as amended by the Clean Water Act of 1977, 33 U.S.C. 1311, 1314, 1316, 1317, 1318, and 1361; 86 Stat. 816, Pub. L. 92–500; 91 Stat. 1567, Pub. L. 95–217, unless otherwise noted.

SOURCE: 48 FR 15394, Apr. 8, 1983, unless otherwise noted.

Subpart A—Semiconductor Subcategory

§ 469.10 Applicability.

The provisions of this subpart are applicable to discharges resulting from all process operations associated with the manufacture of semiconductors, except sputtering, vapor deposition, and electroplating.

§ 469.11 Compliance dates.

The compliance deadline for the BAT fluoride limitation shall be as soon as possible as determined by the permit writer, but no later than November 8, 1985. The compliance deadline for the BAT and BCT limitations for total toxic organics (TTO) and pH, respectively, is as soon as possible as determined by the permit writer, but in no event later than July 1, 1984. The compliance date for PSES for TTO is July 1, 1984.

§ 469.12 Specialized definitions.

The definitions in 40 CFR part 401 and the chemical analysis methods in 40 CFR part 136 apply to this subpart.

In addition,

(a) The term "total toxic organics (TTO)" means the sum of the concentrations for each of the following toxic organic compounds which is found in the discharge at a concentration greater than ten (10) micrograms per liter:

1,2,4 Trichlorobenzene chloroform
1,2 Dichlorobenzene
1,3, Dichlorobenzene
1,4, Dichlorobenzene ethylbenzene
1,1,1 Trichloroethane methylene chloride naphthalene
2 Nitrophenol phenol bis (2-ethylhexyl) phthalate tetrachloroethylene toluene trichloroethylene
2 Chlorophenol
2,4 Dichlorophenol
4 Nitrophenol pentachlorophenol di-n-butyl phthalate anthracene
1,2 Diphenylhydrazine isophorone butyl benzyl pthalate
1,1 Dichloroethylene
2,4,6 Trichlorophenol carbon tetrachloride
1,2 Dichloroethane
1,1,2 Trichloroethane dichlorobromomethane

(b) The term "semiconductors" means solid state electrical devices which perform functions such as information processing and display, power handling, and interconversion between light energy and electrical energy.

(c) The term "manufacture of semiconductors" means those processes, beginning with the use of crystal wafers, which lead to or are associated with the manufacture of semiconductor devices.

[48 FR 15394, Apr. 8, 1983, as amended at 48 FR 45250, Oct. 4, 1983]

§ 469.13 Monitoring.

(a) In lieu of monitoring for TTO, the permitting authority may allow direct dischargers to include the following certification as a "comment" on the Discharge Monitoring Report required by § 122.44 (i), formerly § 122.62(i): "Based on my inquiry of the person or persons directly responsible for managing compliance with the permit limitation for total toxic organics (TTO), I certify that, to the best of my knowledge and belief, no dumping of concentrated toxic organics into the wastewaters has occurred since filing the last discharge monitoring report. I further certify that this facility is implementing the solvent management plan submitted to the permitting authority."

(b) In requesting that no monitoring of TTO be required, the direct discharger shall submit a solvent management plan that specifies to the permitting authority's satisfaction the toxic organic compounds used; the method of disposal used instead of dumping, such as reclamation, contract hauling, or incineration; and procedures for assuring that toxic organics do not routinely spill or leak into the wastewater. The permitting authority shall incorporate the plan as a provision of the permit.

(c) In lieu of monitoring for TTO, the control authority may allow industrial users of POTWs to make the following certification as a comment to the periodic reports required by § 403.12(e): "Based on my inquiry of the person or persons directly responsible for managing compliance with the pretreatment standard for total toxic organics (TTO), I certify that, to the best of my knowledge and belief, no dumping of concentrated toxic organics into the wastewaters has occurred since filing the last discharge monitoring report. I further certify that this facility is implementing the solvent management plan submitted to the control authority."

(d) In requesting that no monitoring be required, industrial users of POTWs shall submit a solvent management plan that specifies to the control authority's satisfaction the toxic organic compounds used; the method of disposal used instead of dumping, such as reclamation, contract hauling, or incineration; and procedures for assuring that toxic organics do not routinely spill or leak into the wastewater.

(Approved by the Office of Management and Budget under control number 2040–0074)

[48 FR 15394, Apr. 8, 1983, as amended at 50 FR 4515, Jan. 31, 1985]

§ 469.14 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).

Except as provided in 40 CFR 125.30 through 125.32 any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT):

SUBPART A—SEMICONDUCTOR BPT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Milligrams per liter (mg/l)	
TTO [1]	1.37	[2]
pH	[3]	[3]

[1] Total toxic organics.
[2] Not applicable.
[3] Within the range of 6.0 to 9.0.

§ 469.15 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).

Except as provided in 40 CFR 125.30 through 125.32 any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT):

SUBPART A—SEMICONDUCTOR BAT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Milligrams per liter (mg/l)	
TTO [1]	1.37	[2]
Fluoride (T)	32.0	17.4

[1] Total toxic organics.
[2] Not applicable.

§ 469.16 Pretreatment standards for existing sources (PSES).

Except as provided in 40 CFR 403.7 and 403.13, any existing source subject to this subpart which introduces pollutants into a publicly owned treatment works must comply with 40 CFR part 403 and achieve the following pretreatment standards for existing sources (PSES):

(a)

SUBPART A—SEMICONDUCTOR PSES EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Milligrams per liter (mg/l)	
TTO [1]	1.37	[2]

[1] Total toxic organics.
[2] Not applicable.

(b) An existing source submitting a certification in lieu of monitoring pursuant to §469.13 (c) and (d) of this regulation must implement the solvent management plan approved by the control authority.

§ 469.17 New source performance standards (NSPS).

Any new source subject to this subpart must achieve the following new source performance standards (NSPS).

SUBPART A—SEMICONDUCTOR NSPS EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Milligrams per liter (mg/l)	
TTO [1]	1.37	[2]
Fluoride (T)	32.0	17.4
pH	[2]	[3]

[1] Total toxic organics.
[2] Not applicable.
[3] Within the range of 6.0 to 9.0.

§ 469.18 Pretreatment standards for new sources (PSNS).

Except as provided in 40 CFR 403.7, any new source subject to this subpart which introduces pollutants into a publicly owned treatment works must comply with 40 CFR part 403 and achieve the following pretreatment standards for new sources (PSNS):

(a)

SUBPART A—SEMICONDUCTOR PSNS EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Milligrams per liter (mg/l)	
TTO [1]	1.37	[2]

[1] Total toxic organics.
[2] Not applicable.

(b) A new source submitting a certification in lieu of monitoring pursuant to §469.13 (c) and (d) of this regulation must implement the solvent management plan approved by the control authority.

§ 469.19 Effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollution control technology (BCT).

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollution control technology (BCT):

SUBPART A—SEMICONDUCTOR BCT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Average of daily values for 30 consecutive days
pH	(1)	(1)

1 Within the range 6.0 to 9.0.

Subpart B—Electronic Crystals Subcategory

§ 469.20 Applicability.

(a) The provisions of this subpart are applicable to discharges resulting from the manufacture of electronic crystals.

§ 469.21 Compliance dates.

The compliance date for the BAT fluoride limitation is as soon as possible as determined by the permit writer but in no event later than November 8, 1985. The compliance date for PSES for total toxic organics (TTO) is July 1, 1984 and for arsenic is November 8, 1985.

[48 FR 45250, Oct. 4, 1983, as amended at 49 FR 5923, Feb. 16, 1984]

§ 469.22 Specialized definitions.

The definitions in 40 CFR part 401 and the chemical analysis methods in 40 CFR part 136 apply to this subpart. In addition,

(a) The term "total toxic organics (TTO)" means the sum of the concentrations for each of the following toxic organic compounds which is found in the discharge at a concentration greater than ten (10) micrograms per liter:

1,2,4 Trichlorobenzene chloroform
1,2 Dichlorobenzene
1,3, Dichlorobenzene
1,4, Dichlorobenzene ethylbenzene
1,1,1 Trichloroethane methylene chloride naphthalene
2 Nitrophenol phenol bis (2-ethylhexyl) phthalate tetrachloroethylene toluene trichloroethylene
2 Chlorophenol
2,4 Dichlorophenol
4 Nitrophenol pentachlorophenol di-n-butyl phthalate anthracene
1,2 Diphenylhydrazine isophorone butyl benzyl pthalate
1,1 Dichloroethylene
2,4,6 Trichlorophenol carbon tetrachloride
1,2 Dichloroethane
1,1,2 Trichloroethane dichlorobromomethane

(b) The term "electronic crystals" means crystals or crystalline material which because of their unique structural and electronic properties are used in electronic devices. Examples of these crystals are crystals comprised of quartz, ceramic, silicon, gallium arsenide, and idium arsenide.

(c) The term "manufacture of electronic crystals" means the growing of crystals and/or the production of crystal wafers for use in the manufacture of electronic devices.

[48 FR 15394, Apr. 8, 1983, as amended at 48 FR 45250, Oct. 4, 1983]

§ 469.23 Monitoring.

The certification alternative to monitoring for Total Toxic Organics (TTO) described in § 469.13 (a), (b), (c), and (d) is applicable to this subpart.

(Approved by the Office of Management and Budget under control number 2040–0074)

[48 FR 15394, Apr. 8, 1983, as amended at 50 FR 4515, Jan. 31, 1985]

§ 469.24 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).

Except as provided in 40 CFR 125.30 through 32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT):

SUBPART B—ELECTRONIC CRYSTALS BPT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Milligrams per liter (mg/l)	
TTO 1	1.37	(3)
Arsenic (T) 2	2.09	0.83
Fluoride (T)	32.0	17.4
TSS	61.0	23.0
pH	(4)	(4)

1 Total toxic organics.
2 The arsenic (T) limitation only applies to manufacturers of gallium or indium arsenide crystals.
3 Not applicable.
4 Within the range of 6.0 to 9.0.

§ 469.25 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).

Except as provided in 40 CFR 125.30 through 32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically available (BAT):

SUBPART B—ELECTRONIC CRYSTALS BAT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Milligrams per liter (mg/l)	
TTO [1]	1.37	[3]
Arsenic [2]	2.09	0.83
Fluoride	32.0	17.4

[1] Total toxic organics.
[2] The arsenic limitation only applies to manufacturers of gallium or indium arsenide crystals.
[3] Not applicable.

§ 469.26 Pretreatment standards for existing sources (PSES).

(a) Except as provided in 40 CFR 403.7 and 403.13, any existing source subject to this subpart which introduces pollutants into a publicly owned treatment works must comply with 40 CFR part 403 and achieve the following pretreatment standards for existing sources (PSES):

SUBPART B—ELECTRONIC CRYSTALS PSES EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Milligrams per liter (mg/l)	
TTO [1]	1.37	[2]
Arsenic (T) [3]	2.09	0.83

[1] Total toxic organics.
[2] Not applicable.
[3] The arsenic (T) limitation only applies to manufacturers of gallium or indium arsenide crystals.

(b) An existing source submitting a certification in lieu of monitoring pursuant to §469.13 (c) and (d) of this regulation must implement the solvent management plan approved by the control authority.

[48 FR 15394, Apr. 8, 1983. Redesignated at 48 FR 45250, Oct. 4, 1983]

§ 469.27 New source performance standards (NSPS).

Any new source subject to this subpart must achieve the following new source performance standards (NSPS):

SUBPART B—ELECTRONIC CRYSTALS NSPS EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Milligrams per liter(mg/l)	
TTO [1]	1.37	[2]
Arsenic(T) [3]	2.09	0.83
Fluoride(T)	32.0	17.4
TSS	61.0	23.0
pH	[4]	[4]

[1] Total toxic organics.
[2] Not applicable.
[3] The arsenic(T) limitation only applies to manufacturers of gallium or indium arsenide crystals.
[4] Within the range of 6.0 to 9.0.

[48 FR 15394, Apr. 8, 1983. Redesignated at 48 FR 45250, Oct. 4, 1983]

§ 469.28 Pretreatment standards for new sources (PSNS).

Except as provided in 40 CFR 403.7, any new source subject to this subpart which introduces pollutants into a publicly owned treatment works must comply with 40 CFR part 403 and achieve the following pretreatment standards for new sources (PSNS):

(a)

SUBPART B—ELECTRONIC CRYSTALS PSNS EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Milligrams per liter (mg/l)	
TTO [1]	1.37	[2]
Arsenic (T) [3]	2.09	0.83

[1] Total toxic organics.
[2] Not applicable.
[3] The arsenic (T) limitation only applies to manufacturers of gallium or indium arsenide crystals.

(b) A new source submitting a certification in lieu of monitoring pursuant to §469.13(c) and (d) of this regulation

must implement the solvent management plan approved by the control authority.

[48 FR 15394, Apr. 8, 1983. Redesignated at 48 FR 45250, Oct. 4, 1983]

§ 469.29 Effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollution control technology (BCT).

Except as provided in 40 CFR 125.30 through 32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollution control technology (BCT):

SUBPART B—ELECTRONIC CRYSTALS BCT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Milligrams per liter (mg/l)	
TSS	61.0	23.0
pH	(1)	(1)

[1] Within the range of 6.0 to 9.0.

[48 FR 15394, Apr. 8, 1983. Redesignated at 48 FR 45250, Oct. 4, 1983]

Subpart C—Cathode Ray Tube Subcategory

AUTHORITY: Secs. 301, 304, 306, 307, 308, 309, and 501 of the Clean Water Act (the Federal Water Pollution Control Act Amendments of 1972, as amended by the Clean Water Act of 1977, 33 U.S.C. 1311, 1314, 1316, 1317, 1318, and 1361; 86 Stat. 816, Pub. L. 92–500; 91 Stat. 1567, Pub. L. 95–217).

SOURCE: 48 FR 55704, Dec. 14, 1983, unless otherwise noted.

§ 469.30 Applicability.

(a) The provisions of this subpart are applicable to discharges resulting from the manufacture of cathode ray tubes.

(b) The compliance deadline for PSES shall be no later than July 14, 1986.

[48 FR 55704, Dec. 14, 1983; 49 FR 1056, Jan. 9, 1984]

§ 469.31 Specialized definitions.

The definitions in 40 CFR part 401 and the chemical analysis methods in 40 CFR part 136 apply to this subpart. In addition,

(a) The term "cathode ray tubes" means electronic devices in which electrons focus through a vacuum to generate a controlled image on a luminescent surface. This definition does not include receiving and transmitting tubes.

(b) The term "total toxic organics (TTO)" means the sum of the concentrations for each of the following toxic organic compounds which is found in the discharge at a concentration greater than ten (10) micrograms per liter:

1,1,1 Chloroform
Trichloroethane
Methylene chloride
Bis (2–ethylhexyl) phthalate
Toluene
Trichloroethylene

§ 469.32 Monitoring requirements.

The certification alternative to monitoring for TTO specified in § 469.13 (a), (b), (c) and (d), is applicable to this subpart.

(Approved by the Office of Management and Budget under control number 2040–0074)

[48 FR 55704, Dec. 14, 1983, as amended at 49 FR 34823, Sept. 4, 1984]

§ 469.34 Pretreatment standards for existing sources (PSES).

Except as provided in 40 CFR 403.7 and 403.13, any existing source subject to this subpart which introduces pollutants into a publicly owned treatment works must comply with 40 CFR part 403 and achieve the following pretreatment standards for existing sources (PSES):

Pollutant or pollutant property	Maximum for any 1 day	Monthly average shall not exceed
	Milligrams per liter (mg/l)	
TTO [1]	1.58	.....
Cadmium	0.06	0.03
Chromium	0.65	0.30
Lead	1.12	0.41
Zinc	1.38	0.56
Fluoride	35.0	18.0

[1] Total toxic organics.

§ 469.35 New source performance standards (NSPS).

Any new source subject to this subpart must achieve the following new source performance standards (NSPS):

Pollutant or pollutant property	Maximum for any 1 day	Monthly average shall not exceed
	Milligrams per liter (mg/l)	
pH	(2)	(2)
TTO [1]	1.58	
Cadmium	0.06	0.03
Chromium	0.56	0.26
Lead	0.72	0.27
Zinc	0.80	0.33
Fluoride	35.0	18.0
TSS	46.0	24.0

[1] Total toxic organics.
[2] Within the range of 6.0 to 9.0.

§ 469.36 Pretreatment standards for new sources (PSNS).

Except as provided in 40 CFR 403.7, any new source subject to this subpart which introduces pollutants into a publicly owned treatment works must comply with 40 CFR part 403 and achieve the following pretreatment standards for new sources (PSNS):

Pollutant or pollutant property	Maximum for any 1 day	Monthly average shall not exceed
	Milligrams per liter (mg/l)	
TTO [1]	1.58	
Cadmium	0.06	0.03
Chromium	0.56	0.26
Lead	0.72	0.27
Zinc	0.80	0.33
Fluoride	35.0	18.0

[1] Total toxic organics.

Subpart D—Luminescent Materials Subcategory

AUTHORITY: Secs. 301, 304, 306, 307, 308, 309, and 501 of the Clean Water Act (the Federal Water Pollution Control Act Amendments of 1972, as amended by the Clean Water Act of 1977, 33 U.S.C. 1311, 1314, 1316, 1317, 1318, and 1361; 86 Stat. 816, Pub. L. 92–500; 91 Stat. 1567, Pub. L. 95–217).

SOURCE: 48 FR 55704, Dec. 14, 1983, unless otherwise noted.

§ 469.40 Applicability.

The provisions of this subpart are applicable to discharges resulting from the manufacture of luminescent materials.

§ 469.41 Specialized definitions.

The definitions in 40 CFR part 401 and the chemical analysis methods in 40 CFR part 136 apply to this subpart. In addition,

(a) The term "luminescent materials" shall mean materials that emit light upon excitation by such energy sources as photons, electrons, applied voltage, chemical reactions or mechanical energy and which are specifically used as coatings in fluorescent lamps and cathode ray tubes. Luminescent materials include, but are not limited to, calcium halophosphate, yttrium oxide, zinc sulfide, and zinc-cadmium sulfide.

§ 469.42 New source performance standards (NSPS).

Any new source subject to this subpart must achieve the following new source performance standards (NSPS):

Pollutant or pollutant property	Maximum for any 1 day	Monthly average shall not exceed
	Milligrams per liter (mg/l)	
pH	(1)	(1)
Cadmium	0.55	0.26
Antimony	0.10	0.04
Zinc	1.64	0.67
Fluoride	35.0	18.0
TSS	60.0	31.0

[1] Within the range of 6.0 to 9.0.

§ 469.43 Pretreatment standards for new sources (PSNS).

Except as provided in 40 CFR 403.7, any new source subject to this subpart which introduces pollutants into a publicly owned treatment works must comply with 40 CFR part 403 and achieve the following pretreatment standards for new sources (PSNS):

Pollutant property	For any 1 day	Monthly average shall not exceed
	Milligrams per liter (mg/l)	
Cadmium	0.55	0.26
Antimony	0.10	0.04
Zinc	1.64	0.67
Fluoride	35.0	18.0